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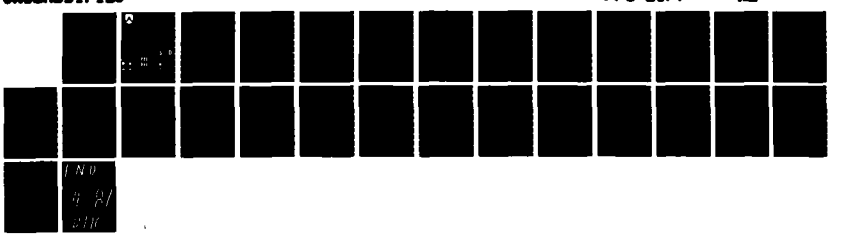

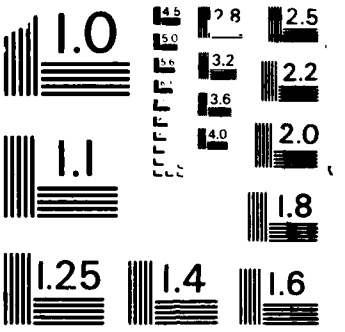

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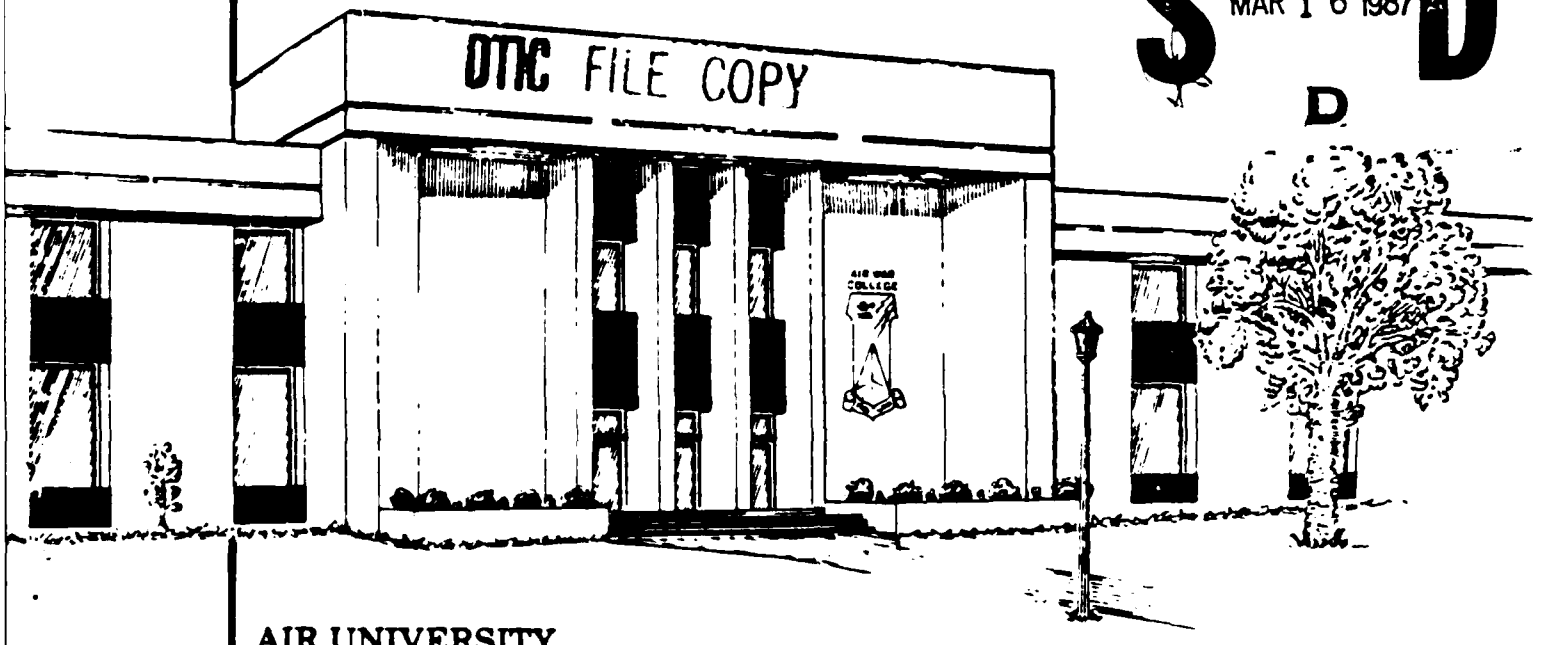
RESEARCH REPORT

No. AU-AWC-86-155

THE AIRLAND BATTLE AND THE ITALIAN AIR FORCE

By COLONEL CLEMENTE MORISCO, ITALIAN AF



AIR UNIVERSITY
UNITED STATES AIR FORCE
MAXWELL AIR FORCE BASE, ALABAMA

AIR WAR COLLEGE

AIR UNIVERSITY

THE AIRLAND BATTLE AND THE ITALIAN AIR FORCE

BY

CLEMENTE MORISCO

COLONEL, ITALIAN AIR FORCE

A RESEARCH REPORT SUBMITTED TO THE FACULTY

IN

FULFILLMENT OF THE RESEARCH REQUIREMENTS

RESEARCH ADVISOR: COLONEL WILLIAM C. ALLISON

MAXWELL AIR FORCE BASE, ALABAMA

MARCH 1986

DISCLAIMER-ABSTAINER

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AIR WAR COLLEGE REPORT ABSTRACT

AUTHOR: Colonel Clemente Morisco, Italian Air Force

TITLE: The AirLand Battle and the Italian Air Force

After a brief description of the principles of the AirLand Battle Doctrine, this paper will analyze the implications connected with its applicability in the operational environment, from a standpoint of the Air Force. More importantly, the impact of the new doctrine on the Italian Air Force (ITAF) will be described. Major deficiencies still existing in the current force structure of the ITAF will be illustrated and some personal comments will also be provided.

BIOGRAPHICAL SKETCH

Colonel Clemente Morisco was born in Asmara, Ethiopia, in 1946 and began his military career in 1964 when he entered the Italian Air Force Academy.

After graduation in 1967, he received his flying training in jet fighter aircraft and then served for four years in an AWX interceptor squadron.

His most interesting experiences are related to his fighter pilot assignments. He performed for four years as an instructor pilot in the IF 104 G and for two years as a commander of an Air Force Academy class.

Colonel Morisco was also squadron commander and D.O.O. of the 4th Wing for two years. Prior to coming to the Air University, Colonel Morisco was the Chief, Logistics Plans Section, in the Italian Air Staff. Colonel Morisco and his wife Enrica, have one daughter, Simona.

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CHAPTER I

INTRODUCTION

Since the early 1970s, the NATO Alliance has been characterized by a military imbalance with Soviet/Warsaw Pact forces. In order to meet the challenge posed by the superior numbers of men, material, and equipment, the US Army developed their warfighting doctrine as contained in FM 100-5, Operations. Entitled "Airland Battle Doctrine," the Army concept of bold action against first and second echelon enemy forces is an earnest attempt to seize the initiative and take the battle to the enemy.

Based on the assumption, at least in the European Theater, that Soviet/Warsaw Pact forces will deploy in two echelons, the US Army doctrine, as applied in Europe, intends to lessen the drawbacks of NATO's "Forward Defense" by seeking to maneuver in depth, beyond the forward line of own troops (FLOT), in order to defeat enemy follow-on forces. As the name implies, AirLand Battle serves as a notice for the air forces that they are key players in the execution of this doctrine. Thus, while the destruction of enemy airplanes and airfields remain top priority in air doctrine, active Air Force participation in the land battle is absolutely required. The mission of deep attack and battlefield air interdiction become a must. Before the evolution of the current doctrine, they were accomplished if and

when resources were available. Therefore, NATO armies and air forces must now change their priorities in terms of their roles and missions in order to implement the new doctrine and consequently their force structure as well. The AirLand Battle Doctrine, to be effective, is the combined effort of all ground and air forces, directed against the enemy in depth as a part of an overall campaign plan. That plan includes, not only the deep battle, but the close-in and rear battles as well.

From the Air Force perspective, there are many implications connected with the application of the new doctrine. Specifically, when refering to the high costs of equipping and sustaining a modern Air Force to meet the extended battlefield requirements, it is easy to understand how difficult the implementation of this doctrine becomes. Nevertheless, the doctrine of the AirLand Battle (ALB) has had a positive impact on the Italian Air Force.

Since its' approval/acceptance within the NATO Alliance, we have made significant improvements in our combat capabilities. There are, however, considerable initiatives that we need to pursue in order to fully implement the doctrine. After briefly reviewing doctrinal developments since 1976, and the basic principles of the ALB doctrine, the Italian Air Force goals will be presented by describing what is being planned to overcome the existing shortcomings in the main areas of the new doctrine.

CHAPTER II

BACKGROUND

The term used to describe the 1976 doctrine was "Active Defense." "Active Defense" applied battlefield calculus formulas to the potential battlefield in Europe, making analytical or scientific assumptions about force ratios. Counterattacks were not encouraged because of the manual's insistence on the superiority of weapons firing from protected positions. Calling for a head-to-head fight from prepared positions, the "Active Defense" discouraged commanders from holding reserves at all. Since the key to success would be in massing all available firepower against the enemy, withholding any forces from the fight was considered risky. Emphasizing battle at battalion and company level, the 1976 doctrine pictured conventional war between mechanized forces on a linear battlefield. (1) Thus, it was considered a defensive-minded document which immediately needed to be updated.

Most of the changes occurred when the US Army turned the focus of attention to Europe after 10 years of concentrating on the conflict in Vietnam. Since then, Army doctrine has steadily broadened its' view in order to address the world-wide commitments and varied threats we face today. As a result of the study of the threat posed in Europe, by the numerical superiority of Soviet/Warsaw Pact Nations, emphasis was given to the

medium/high intensity conflict. Also, the experiences of the Israelis in the 1973 Arab-Israeli War, pointing out the lethality of modern conflict, provided a great contribution to the development of US Army doctrine. Therefore, as a result of the most dangerous threat and the dissatisfaction with the "Active Defense," (particularly with its failure in dealing adequately with attacking forces in depth), led to the revision of the Army's basic war-fighting doctrine in 1980. (2)

AIRLAND BATTLE DOCTRINE

The current Field Manual 100-5 was published in 1982. In it, the US Army Training and Doctrine Command (TRADOC) designed its' new doctrine "AirLand Battle" to emphasize the importance of air-ground cooperation in the extended battlefield. Designed for mid-high intensity conflict, this doctrine provides general guidelines that US Army units, primarily echelons above corps (EAC), and corps, would use to fight on the modern battlefield. AirLand Battle seeks to exploit the full potential of ground forces by blending two concepts: attacking the entire enemy force to its full depth and synchronizing all available combat means, including those of Air Force, to win. The US Army defines winning as "destroying the enemy's willingness and his capability to fight." AirLand Battle is based on securing the initiative and exploiting it vigorously to defeat the enemy forces. This is achieved by throwing the enemy off balance with powerful initial

blows from unexpected directions and then following-up rapidly to prevent his recovery. (3)

Although NATO is a defensive alliance, to win, one must attack; and, in accordance with the strategy of "Flexible Response," the new doctrine stresses the initiative in choosing the place, time and means of reaction. Even if he starts from a defensive posture, in order to perform his mission, the ground commander must do the following:

- Rapidly transit the FLOT;

- Drive deep;

- Conduct lethal and violent attacks "on the move" to destroy "high payoff" targets of the uncommitted echelons as they are encountered;

- Refuse decisive engagements;

- Prepare for commitment to continue the attack either on the rear of the first echelon divisions or to the depth of enemy's formations before they can join the battle. (4)

To ensure unity of effort and success in combat, all three areas of engagement; deep, close-in and rear, are to be considered as interrelated parts of one single battle. The deep battle must be closely coordinated with the close-in and rear battle in all its' operating elements: ground and air forces. The commander's decision to attack deep is primarily to create a "window" for friendly offensive actions in the future. The commander does this by concentrating acquisition means and attack

resources on key targets which provide the highest payoff in supporting the commander's scheme of maneuver and upsetting enemy plans. As a result, the friendly forces can seize the initiative and win the all important close-in battle. What emerged as new doctrine was the emphasis of "initiative, depth, agility, and synchronization" of efforts. (5)

It is in the area of depth that the most important changes for the ground commander occurred. FM 100-5 addresses the concept of depth when it states:

> To succeed against superior numbers, the commander must not limit his attack or defense to the vicinity of forward line of our own troops (FLOT). He supports the main effort by fire or maneuver that reaches deeply into enemy's zone of action. He strikes the enemy's vulnerable high value targets or engages his still undeployed FOF (Follow on Forces). Thus, the commander seeks to set the terms of both throughout the depth of the battlefield.

The offensively-oriented Army doctrine is designed to extend the battlefield. The ground commander is concerned not only with the Main Battle Area (MBA), but he must focus on enemy follow-on forces (FOF). Damage to the second echelon forces can disrupt the momentum of the attack until ground forces are prepared to engage the fresher follow-on forces. Valuable time is gained by front line troops who can then prepare for the follow-up attacks. Thus, the commander has the added dimensions of time and space to consider in his implementation of doctrine.

As pointed out by Colonel W. G. Hanne, USA, Strategic

Studies Institute, "The linchpin to the entire operational concept is accurate and timely intelligence on enemy forces, the terrain and the weather."

Most important is the time element in which enemy second echelon forces can influence the battle. The brigade, division and corps commanders must be responsible for enemy troops within 12, 24 and 72 hours respectively. (EAC up to 96 hours). Collecting enemy order of battle data, much of which is time sensitive, requires intelligence from all sources both tactical and strategic. AirLand Battle doctrine also emphasizes the use of conventional weapons and provides guidelines for defensive and offensive nuclear and chemical operations in view of the growing Soviet capability to employ these weapons.

CONSIDERATIONS

Since the time of its doctrinal development from the "Active Defense," the doctrine of AirLand Battle is still evolving in order to meet the requirements of today's and tomorrow's battlefield. Rather than being revolutionary, the ALB is an evolutionary doctrine based on the principle of war and the study of military history. A new revision of ALB will be forwarded to the field in June 1986. The extended battlefield is not, however, a new concept. It is a more descriptive term for indicating the full potential we must realize from our acquisition, targeting and weapons systems. The concept of

operation expressed in the AirLand Battle doctrine requires the ground commander to see deep and attack deep with all resources available. He uses the joint operational capabilities of both the land and air forces which are integrated perfectly and coordinated through a reliable Command, Control and Communication system. (6)

Today, Soviet doctrine also emphasizes the principle of mass and maneuver and seeks victory through a relentless presentation of the offensive actions.

If nuclear and chemical weapons are required to ensure success, Soviet/Warsaw Pact forces will use them. Their armies are equipped, armed and trained to use nuclear and chemical weapons without need to pause for transition. Against such an enemy, all available military forces of all services must be applied with determination to win. In today's warfare, as in the past, the force that retains the initiative will win. On the integrated airland battlefield, the key to retaining the initiative is disrupting the enemy's fighting capability with deep attacks, effective use of firepower, and decisive maneuver. Firepower provides "the enabling, violent, destructive force essential to successful maneuver." Maneuver and firepower are inseparable and complementary elements of combat." (7)

The ALB doctrine places considerable emphasis on leadership, more so than in the doctrine termed "Active Defense." In accordance with Clausewitz (Military Genius On War), courage,

both physical and moral, is the first requirement for a soldier. Courage joined to a powerful intellect or strong mind produce determination; however, strong will, presence of mind, strength of character, energy, physical resistance, intellectual ability, experience and audacity are the most important traits required for a military chief. The harmonious combination of all these qualities will allow a commander to overcome the components in which war moves: risk, danger, uncertainty, and change. (8) Leadership is an enduring military constant: "Leaders are the crucial elements of combat power."

It is evident from all that I have said, that the new doctrine emphasizes the human dimension of war, pointing out that men and not systems, win wars. In the modern environment, leaders need to be more skillfull, more imaginative, and more flexible than ever before. The doctrine encourages an aggressive spirit in all operations; stresses the use of mission orders; and the importance of initiative at every level, in order to overcome the "fog of the battle" in the absence of communications. Training is the cornerstone of success in battle and training for war is the principal peacetime responsibility of all commanders. (9)

Furthermore, using high technology weapons is a tool to achieve success. Concerning aircraft, helicopters, and weapons systems; technology is required to solve problems in the following areas: attrition rate, night and bad weather attack

conditions, precision surface-to-surface missiles, and battlefield air interdiction. Thus, for the implementation of the doctrine, enormous resources/money are required to achieve and maintain the operational capability. The technology is potentially available. It must be exploited in the new development of weapon systems dedicated to both the deep attack and battlefield air interdiction.

Developments in the fields of intelligence, ammunition, and remotely piloted vehicles (RPV) are opening new possibilities for effective, long-range engagement of targets in the depth of the enemy area. According to General Rogers' (SACEUR) statement, "Emerging technology weapons can increasingly accomplish missions that previously required testing nuclear weapons. For example, missiles could be launched from the air or ground to shower armor-piercing bomblets over attacking enemy columns. Since each bomblet homes in on a separate target, a single missile could take out entire companies of tanks."

If we can utilize "emerging technologies" effectively to combine accurate long range weapons, rapid and comprehensive reconnaissance, and real time transmission of all the information gathered, then all these technological developments will make a substantial contribution to strengthening the forward defense concept of AirLand Battle doctrine. (10)

In economic terms, the application of the new doctrine demands the expenditure of large funds. Peace, security and

freedom cannot be obtained and maintained free of charge. The common goal to pursue peace can be achieved only if each Allied country continues to contribute to it, even if more sacrificies are required. Therefore, within the scope of their own political and economic possibilities, Allied partners must make greater efforts to implement the AirLand Battle Doctrine and improve NATO conventional capability as well.

CHAPTER III

AIRLAND BATTLE AND THE ITALIAN AIR FORCE

As far as offensive actions being directed deep against enemy forces, the employment philosophy of the Italian Tactical Air Forces is consistent with the offensive initiative the AirLand Battle Doctrine is based upon. From an operational standpoint, the concepts of the AirLand Battle Doctrine seem to be applicable, in a easier way, in Northeast Italy, rather than in other European sections. If we look at the Yugoslavian territory which exists between Italy and the Hungarian border, especially when considering that Yugoslavia is not on the side of the Warsaw Pact, we can easily agree that this land mass which is 220 km long:

1) is critically important for providing adequate response time of our forces;

2) allows a limited number of enemy "penetration avenues;"

3) represents a broad extension of enemy LOCs, and. . . ;

4) constitutes for the enemy a forward area of operations in which Air Defense Forces cannot research and continously sustain the air supremacy/air parity required for conducting sustained ground operations.

In other words, this land territory is, in many ways, a disadvantage to the Soviet/Warsaw Pact forces in conducting

offensive actions. Therefore, I believe that the AirLand Battle Doctrine is applicable, especially in NE Italy and as far as the Italian Tactical Air Forces are concerned. The Italian Tactical Air Force is postured to:

1) slow down to the maximum extent possible, the movement capability of enemy ground forces, control the rate of flow of enemy forces into the battle area;

2) strain enemy forces, and allow it to funnel enemy forces and shape the battlefield; and. . .

3) strike enemy LOC's, to impact timing and tempo of enemy operations.

In accordance with the ALB doctrine, Battlefield Air Interdiction (BAI) is one of the main tools suggested to achieve the above mentioned goals. In order to achieve these goals, some fundamental functions must be accomplished. To strike deep, you must first be able to see deep on the (word deleted) Timely intelligence can be offered through reconnaissance missions executed with dedicated aircraft such as UNMANNED aircraft (UMA), airborne warning and electronic search measures (ESM) which are able to operate day and night and in all weather conditions.

All the information collected must be transmitted to the ground control centers for analysis and dissemination. Much information is required to maintain an updated situation so that a great number of recconnaissance missions can be carried out

with specialized and highly sophisticated systems. Unfortunately, in this field of recconnaissance, ITAF is not well equipped. Most of the sensors available, at present, are based on photo-camera equipment. This means that there are significant limitations for a fully operational capability due, primarily, to the long period of time required to accomplish the entire photo-camera developing process.

Only a few sensors are available that have the capability to operate in low intensity light conditions; however, their output is still the photo. Due to the mobility of the threat, it is necessary to have as close to "Real Time" information available to our strike aircraft as possible. The problem is under consideration within the air staff, as well as in the acquisition process, for the following new systems:

1) electro-optical sensors to be installed on recconnaissance aircraft.

2) effective Electronic Search Measures (ESM) capability systems;

3) data-link systems to provide real time data-link of information to the users; and,

4) UMA aircraft for more effective implementation of present Italian Air Force capability based currently on a short number of reconnaissane aircraft.

These force goals are thought to be the best possible method

(considering the availability of funds) of overcoming existing deficiencies in this important area. These modernization initiatives, need to be attacked gradually and implemented over a long period of time since the acquisition costs are very high.

One of the most important aspects of the evolving US Army doctrine is the function of command, control, and communications (C3) including the following activities:

1) evaluating entire tactical situations both with Land and Air Force commanders;

2) making appropriate and timely decisions; and,

3) executing decisions rapidly.

It seems quite clear that the C3 function is to be considered in two different aspects. Technically speaking, it is necessary that the force structure, in terms of communication systems, has to be implemented as well as the introduction of automatic data processing systems. Also, as far as the operational chain of command and control is concerned, those individuals who have the responsibility to decide on joint military questions, must make their decisions on a basis of common interests and objectives. This point in the AirLand Battle Doctrine, has a major impact on conducting airland operations. For the success, they must be planned and executed in a well coordinated and precisely integrated manner.

The command and control function is now accomplished

through a force structure that is barely able to perform its mission. The current organizaton of NATO forces in Italy (Com Land South and Com Five ATAF) doesn't completely meet the requirements of the US Army doctrine. This is due, primarily to the lack of communications and, in some cases, knowledge of reciprocal problems and needs.

The Italian Air Staff plans to continue replacing, gradually, all of the attack fighter aircraft with new ones which will be provided with a more precise firing capability, a greater weapons capacity, and greater survival capability. At same time, more specialized weapons systems are still under consideration. Most of these will provide "stand off" capability, precise homing, and will be specifically devoted to the destruction of ground forces. The following systems are to be retained:

1) MW-1: provided with features to better fulfill antitank missions;

2) Maverick: missile based on infrared capability both for target acquisition and target homing; and

3) LOC-POD: consisting of a big cluster bomb, self propelled and provided with inertial navigation. On the other hand, it is vitally important to reduce the attrition rate caused by the ground threat, such as: AAA and S/A missile systems. Also, due to the fact that threat sources are of many different kinds, it is quite difficult to have technical solutions achieving a secure and complete reliability. In order to

guarantee the best results possible, the following solutions are still under consideration:

1) jamming and deception against radar centers using electronic systems, and specialized airplanes like the remotely piloted vehicles (RPV);

2) jamming infrared sensors utilizing flares; and

3) attacking radiant objectives utilizing specialized antiradiation armament.

The last important function to be considered is the requirement to defeat the threat posed by enemy air forces against NATO's land forces. The offensive concept, consistent with AirLand Battle Doctrine, advocates ground maneuver to be conducted in depth. The "Deep Attack" takes into consideration the fact that air operations must first have air superiority or air parity for a critical period of time. Moreover, the offensive counter air mission, resulting in the deliberate attacking of airfields, can greatly degrade the threat. For an appropriate containment of the enemy air threat, the significant role and contribution provided by air defense systems is recognized and is required to cover areas of operations to the maximum extent possible to obtain the necessary air superiority/air parity over the battlefield at the right place and the right time.

In operational terms, this also means that radar systems must have low-low level acquisition capability and, airplanes

must be provided with long flying endurance and multiple target engagement capability. Unfortunately, the current air defense structure of ITAF is not consistent with the above mentioned requirements. However, new force goals have been finalized within the Air Staff. Our current air defense aircraft, the old but still reliable F1Ø4 will be replaced with a new airplane by the end of this century. This new aircraft (possibly the European Fighter Aircraft) will be acquired through European coproduction.

In the meantime, in order to better fulfill its air defense mission, F1Ø4 aircraft have been provided with lookdown and shootdown capability. In addition, some other improvements are still under consideration for the implementation of Air Force structure such as:

1) F1Ø4 will be provided with flying refueling capability;

2) A certain number of tanker airplanes will be purchased, and

3) Airborne radar systems will implement the current radar systems chain.

Although fund constraints do not permit us to consolidate new programs in the near term, the above considerations illustrate the direction in which ITAF is moving.

CHAPTER IV

CONCLUSION

The AirLand Battle Doctrine was developed to offset Soviet/Warsaw Pact numerical superiority. From the operational point of view, the new doctrine gives emphasis to initiative and offensive operations conducted throughout the width and depth of the battlefield. These operations are required to be carried out in close coordination with both the land and air forces.

An important requirement for the implementation of the AirLand Battle Doctrine is a technological emphasis stemming from what has been called the "emerging technologies" of target surveillance, target acquisition, command-control-communication and intelligence (C3I), as well as precision guidance, along with whole new classes of non-nuclear munitions and submunitions. Despite some restraints connected with the implementation of the US doctrine in the tactical environment within the European Theater, the AirLand Battle Doctrine is to be considered a good starting point or a guideline through which new fighting concepts can be developed for the employment of AirLand forces required to fight future wars.

Generally speaking, the current employment of the Italian Tactical Air Forces is consistent with the offensive orientation of the AirLand Battle Doctrine. In order to fulfill its mission in the best way possible, according to emerging doctrinal requirements, some operational aspects need to be improved and

considered as appropriate.

The acquisition of some critical systems, such as, the Command-Control-Communication and Intelligence sensors for appropriate coordination of both land and air forces in NE Italy is strongly encouraged by Italian Air Staff within the present availability of funds. Finally, should be realized that those who do not make sacrifices now may some day be forced to make even greater sacrifices. Clausewitz statement in his book "On War" remains true: "the aim is to make peace as secure as possible, and for this purpose no momentary sacrifice may be considered too great."

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